THE ORIGIN, NATURE AND PROPERTIES OF LIGHT; A SERMON.

BY

HENRY HUNTER, D. D.

[*Price One Shilling.*]

THE

ORIGIN, NATURE, AND PROPERTIES OF LIGHT.

A

SERMON

PREACHED BEFORE

THE SOCIETY

FOR

PROMOTING RELIGIOUS KNOWLEDGE

AMONG

THE POOR,

AT THEIR ANNUAL MEETING, Nov. 14,

1793.

By HENRY HUNTER, D. D.
MINISTER OF THE SCOTS CHURCH, LONDON-WALL.

Hail, holy Light, offspring of Heaven first-born,
Or of the Eternal co-eternal beam!
May I express thee unblamed? Since God is Light,
And never but in unapproached Light
Dwelt from eternity; dwelt then in thee,
Bright effluence of bright essence increate.
Or hear'st thou rather pure ethereal stream,
Whose fountain who shall tell? MILTON.

Published by Request of the Stewards.

LONDON:
PRINTED FOR THE AUTHOR, BY T. GILLET, BARTHOLOMEW-CLOSE,
AND SOLD BY T. FIELD, No. 11, CORNHILL,
BOOKSELLER TO THE SOCIETY.

1793.

SERMON

THE SOCIETY

THE POOR.

BRITISH MUSEUM

47.
2. 12
111.

TO

ROBERT MAITLAND, Esq. *Treasurer*,

Mr. Alex. Wylie, Mr. Richard Smales,
Mr. Robert Browning, Mr. Henry Eggers,
Mr. Samuel Carter, Mr. James Ware,
Mr. John P. Lepard, Mr. William Gale,
Mr. Thomas Strong, Thomas Platt, Esq.
Mr. John Maitland, Jun. Mr. John Hammond,

STEWARDS OF THE SOCIETY

FOR PROMOTING

RELIGIOUS KNOWLEDGE AMONG THE POOR,

For the Year 1793.

GENTLEMEN,

THIS Discourse having been honoured with your approbation, and venturing into the light at your request, you have made yourselves, in some measure, responsible for it; I must therefore take the liberty to recommend it to your protection.

I have, likewise, in compliance with your wishes, prefixed a short state-

ment

ment of the institution, the views, the exertions, and the success, of the Society, for the information of those into whose hands the Sermon may fall, in hope they may be induced to contribute their assistance, toward the support and extension of this good work.

It must yield unfeigned satisfaction to every one who fears God, and loves his Country, to reflect, that while the frantic Rulers of a great neighbouring Nation are endeavouring to establish Atheism and Irreligion by a law; various, unremitting, and prosperous efforts are daily made, by persons of every rank, among us, to diffuse useful knowledge, and to enforce the obligations of practical Christianity. May this excellent spirit be ever kept alive in every corner of our highly favoured Island.

The

The active part which you have lately taken in promoting the benevolent and truly patriotic purposes of this Institution, merits the acknowledgments, not of the Society only, but of your Country; in as much as the knowledge, love, and practice of the "Truth, as it is in JESUS," are the choicest ingredients in the character of a good Citizen and loyal Subject.

With those of the Public, be pleased to accept the sincere thanks of,

GENTLEMEN,

Your obliged, and

Obedient humble Servant,

HENRY HUNTER.

Bethnal-Green Road,
Nov. 23, 1793.

The active part which you have lately taken in promoting the benevolent and truly patriotic purposes of this Institution, I have to acknowledge-merely not of the Society only, but of your Country: In as much as the knowledge, love, and practice of the "Truth, as it is in JESUS," are the choicest ingredients in the character of a good Citizen and loyal Subject.

With those of the Public, be pleased to accept the sincere thanks of

GENTLEMEN,

Your obliged and

Obedient humble Servant,

HENRY RAY PUNTER.

A

SHORT ACCOUNT

OF THE

RISE, PROGRESS, AND PRESENT STATE

OF

THE SOCIETY

For promoting Religious Knowledge among the Poor.

THIS Society was inſtituted in the year 1750. A laudable zeal for the glory of God, and compaſſion for precious ſouls, *periſhing through lack of knowledge*, ſuggeſted this benevolent deſign, and happily effected it. At that period, * ſome perſons of pious, liberal, and enlarged minds, deeply impreſſed with a ſenſe of the deplorable ignorance which prevailed in the lower ranks of the community, agreed to aſſociate for the purpoſe of diſſeminating, among ſuch, the knowledge of Divine Truth, by furniſhing them with Bibles, and with other plain, practical Books, on religious ſubjects. And who that believes and prizes the SCRIPTURES, as a Revelation from Heaven; who that has himſelf taſted the ſweetneſs, and felt the power, of the ſacred truths which they contain, but muſt be diſpoſed to make others partake with them of the ſame light and joy?

This ſuggeſtion was a live coal from the altar of God. It illuminated and kindled as it went: The holy ardor was communicated from ſoul to ſoul, and, through the bleſſing of Providence, the hallowed ſpark is increaſed and multiplied into a glorious conſtellation. The hand of God has ſtamped upon it the

* The name of the late Mr. *Benjamin Forſitt*, of Leadenhall-Street, deſerves to be here mentioned with diſtinguiſhed reſpect; a man whoſe enlarged and benevolent ſoul was habitually employed in deviſing *liberal things* toward his fellow creatures, as a tribute of gratitude and praiſe to his CREATOR. He it was in whoſe ardent mind the idea of this undertaking originated; he planned the fabric, he put the machine in motion, he lived to ſee the deſign proſpering; and let him be tranſmitted to poſterity as the FATHER of the Society.

ſolemn

ſolemn ſanction of almoſt half a century; a new generation has ariſen, and is daily riſing, to perpetuate and extend the honourable purpoſe of their forefathers; a few have gradually become a great multitude; and the Inſtitution, with humble confidence, looks forward to a duration commenſurate with that of the ſun.

But the Society preſumes not to promiſe itſelf either ſtability or ſucceſs, independent of honeſt, vigorous, and perſevering exertion. Information is accordingly, from time to time, given, of its exiſtence, of its views, and of its proceedings. This addreſs, among other means, will make known, where it may come, that the Book Society, as it is called, is, at the cloſe of the preſent year, 1793, in full health and growing proſperity: and, in order to the continuance and increaſe of that proſperity, earneſtly ſolicits the countenance and ſupport of all who wiſh that Satan's kingdom may be deſtroyed, and that the empire of knowledge, truth, and love may be extended. Cordially diſclaiming every thing that favours of party, it makes a bold appeal to the liberal, and the good of every denomination, to come and help its ſupporters, to promote a ſpirit of piety, habits of order and induſtry, and ſerious practical godlineſs, among the more thoughtleſs and diſorderly, becauſe more uninſtructed claſs of their fellow creatures. *The weapons of their warfare*, they truſt, *are not carnal, but mighty, through God, to the pulling down of ſtrong holds.* What they can confidently caſt on the care of Heaven, they are neither afraid nor aſhamed to recommend to the attention of men. Their object is to diffuſe ſaving truth; and the method they purſue is, to put the word of God into the hand of the young and ignorant, as an allurement to learn to read, and to practiſe the art, after they have acquired it. A very extenſive correſpondence, both foreign and domeſtic, is, from year to year, conveying the pleaſing intelligence, that their *labour is not in vain in the Lord.*

The Contributors to this Charity have the ſatisfaction of being aſſured, that their bounty cannot poſſibly be miſapplied, for it is in their power, if they pleaſe, to be themſelves the diſpenſers of it. A parcel of Books, of a value determined by the ſum ſubſcribed, is, according to a ſtrict and fair rotation, ſet apart to the order of each Subſcriber; notice is regularly ſent, and ſufficient

time

time allowed for claiming them. To be a Contributor is to become a Member, that is, to have the privilege of attending all meetings, and of inſpecting and examining all tranſactions relative to the Inſtitution.

As an earneſt of what may be expected in future, the Society beg leave to mention, in one ſhort ſentence, what they have already done; from which, they hope, it will appear, that their efforts to ſerve the cauſe of God, and Truth, have been neither injudicious nor inefficient. They beg leave, therefore, to inform the Public, that they have already diſtributed upwards of *One Hundred and Thirty-ſix Thouſand* BIBLES AND TESTAMENTS, beſide a very large number of devotional pieces, and religious tracts, adapted to the purpoſes of the Society; ſo that the great end of their being is, in ſtrictneſs of ſpeech, to ſcatter abroad, on the earth, the Word of God. No human compoſition is ſanctioned by their circulation, but upon mature and impartial deliberation, and from a complete and unanimous conviction, that ſuch circulation may contribute to their one great, leading object, *the Promotion of Religious Knowledge among the Poor.*

A Liſt of the Books given away, with their reſpective prices; the names of the Subſcribers, with a farther account of the Society at large, is annually publiſhed, and may be had *(gratis)* of the Bookſeller.

DONATIONS and SUBSCRIPTIONS will be thankfully received by

The Rev. JOHN NEWTON, New-Buildings, Coleman-Street,
The Rev. THOMAS TOWLE, No. 1, Cripplegate-Buildings,
The Rev. Dr. STENNET, Muſwell-Hill,
ROBERT MAITLAND, Eſq. King's-Arms Yard, *Treaſurer*,
Mr. THOMAS FIELD, No. 11, Cornhill, *Bookſeller*,
Mr. RICHARD WATTS, No. 10, Bartholomew-Lane, *Secretary*, or
Mr. T. D. HARRIOTT, No. 79, Newgate-Street, who *collects the Subſcriptions.*

ORIGIN, NATURE, AND PROPERTIES OF LIGHT.

GEN. i. 3.

God ſaid, Let there be LIGHT: *and there was* LIGHT.

SOME ſubjects derive luſtre and force from felicity of expreſſion; others, in native majeſty, leave all the powers of expreſſion panting behind, and, like real beauty, are "when unadorned adorned the moſt." In ſome happy inſtances they communicate mutual aid; nobility of ſubject lending dignity and energy to expreſſion, while ſimplicity and grace of language lend additional brilliancy and importance to the ſubject. One of theſe happy inſtances is now before us. The ſubject is LIGHT, "the beginning of the "creation of God;" and the deſcription of its firſt formation correſponds to the ſublimity of the glorious theme, "God ſaid, let there be

light, and there was light.*" What ſimplicity! what elevation!

The preceding context repreſents to us the vaſt univerſe in its firſt principles, a rude, formleſs, diſcordant maſs, overſpread with darkneſs; immenſity without order, or beauty, or magnificence; no life, no motion; exiſtence to no uſe or end: "The earth "was without form and void; and darkneſs "was upon the face of the deep." And

* *Longinus*, the celebrated Critic of Antiquity, in his Treatiſe on the *Sublime*, introduces this paſſage from the Writings of *Moſes*, as a happy inſtance of real majeſty, in both the thought and the expreſſion. His words are, Ταῦτῃ καὶ ὁ τῶν Ἰουδαίων Θεσμοθέτης, οὐχ ὁ τυχὼν Ἀνὴρ, ἐπειδὴ τὴν τοῦ Θείου δύναμιν, καθὰ τὴν ἀξίαν ἐχώρησε, κἀξέφηνεν· εὐθὺς ἐν τῇ εἰσβολῇ γράψας τῶν νόμων, Εἶπεν ὁ Θεὸς" φησί. τί; "γενέσθω φῶς, καὶ ἐγένετο. γένεσθω γῆ, καὶ ἐγένετο." "The Jewiſh Legiſlator too, a Man of no ordinary ability, excels in this; having conceived an idea of the power of the Deity, worthy of the ſubject, he thus expreſſes it, in the exordium of his Code of Laws, "God ſaid" what? "Light, Be; and it was: Earth, Be; and it was." Why did he not enrich his elegant little work with more examples from the SACRED VOLUME, and thereby farther approve his taſte and judgment?

It is not eaſy to convey the ſimplicity and force of the original into modern language: ויאמר אלהים יהי אור ויהי אור— Εἶπεν ὁ Θεὸς· γενηθήτω φῶς· καὶ ἐγένετο φῶς. *Dixitque Deus, Lux,* ESTO; *& Lux erat*; literally, in French, *Et Dieu diſoit, Lumière,* SOIS: *et Lumière fut*: in Engliſh; *God ſaid, Light,* BE: *and L was.*

thus,

thus, had no vital principle exiſted, it might have for ever remained. But lo, the impreſs of Deity is upon the unbounded, lifeleſs, unproductive chaos, and the dormant ſeeds of animated nature are warmed into exertion and expanſion: "The ſpirit of God "moved upon the face of the waters:" hence the ſplendor and harmony of theſe ſpheres; hence life in all its gradations, from the plant to the animal, from the animal to man, from man to angels, and theſe again in endleſs progreſſion, till we return at length, from whence we ſet out, to the *living God.*

The Fountain of being alone could have ſupplied us with the hiſtory of this all-important period; and the ſame ETERNAL MIND which planned and executed all theſe ſuns, and all their ſyſtems, evidently dictated the wondrous "ſtory of their birth," of their riſe and progreſs, to the human mind which conceived them, to the ear which heard, and the hand which wrote; even to

> That ſhepherd who firſt taught the choſen ſeed
> In the beginning how the Heavens and Earth
> Roſe out of Chaos. MILTON.

In the view of addreſſing a Society whoſe profeſſed, and moſt meritorious, object it is, to diffuſe the light of ſaving truth, the ſubject of *light* in general occurred to my mind as moſt congenial to their views, and as furniſhing the moſt ample matter to their Preacher for impreſſing on their minds, on his own, and on thoſe who may hear him, the utility and importance of the Inſtitution, that we may not be weary in well-doing, but perſevere in promoting and extending the benefits of a purpoſe thus ſacred to God and to humanity. God grant that he may not "darken "counſel by words without knowledge."

The inſpired hiſtorian leads us directly to the great *ſource* of light, "GOD ſaid." All was hitherto obſcurity, and ſilence, and ſolitude, He only excepted "in whom is no darkneſs "at all," who *was* from eternity, whoſe eye even now "ſaw the end from the begin-"ning," ſcattered the univerſal gloom, ſurveyed riſing worlds, marked their boundaries, aſſigned their ſtations, adjuſted them to their ends.

Were it poſſible that intellectual *created* nature ſhould then have exiſted, what could

it

"have "known of the mind of the LORD, "or, being his counſellor," how could it have taught him the order of procedure? He proceeds like himſelf: the eternal ſilence is at length broken, the firſt articulate ſound is heard through every particle of the vaſt profound; in majeſtic dignity and eaſe He "ſpeaks, "and it is done, He gives commandment, and "it ſtands faſt;" every latent luminous particle is in motion, an image of himſelf ſtarts into being, "Let there be light," and it inſtantly ariſes, and darkneſs, one of the properties of the chaotic ſtate, flies away. Thus the Creator firſt manifeſted himſelf in the light, which was in its turn to make manifeſt every other creature of his power. And what did this new-born light diſcloſe? The antecedent reign, till now inviſible, of confuſion and diſcord. And what *is* this wonderful, primeval production of the Almighty, which exiſted before the ſun, which was in proceſs of time collected into a variety of glorious orbs, to be thence emitted through the whole extent of the creation, to become a ſource of univerſal and unſpeakable joy? Too ſimple to be deſcribed, too glorious to be em-

belliſhed, too myſterious to be explained, and, alas, too common to be prized, I muſt content myſelf with ſuggeſting a few of its more obvious qualities; its nature and eſſence who is able to unfold?

The *firſt* and moſt ſtriking quality of light is its power of communication. As the uncreated has communicated Himſelf to created light, his brighteſt image here below, ſo light again communicates a ſecondary image whereſoever it falls. Some bodies are indeed more ſuſceptible of the impreſſion of light than others. Such as are pellucid eaſily tranſmit the rays; ſuch as are poliſhed eaſily reflect them, and from one to another, in ſimilar direction, without end. But even the moſt opaque and colourleſs ſubſtances are, to a certain degree, enlivened, irradiated, tinged by the rays of the ſun falling upon them. The gilded palace reflects indeed a brighter luſtre, but the dun cottage refuſes not to yield its ſober, duſky acknowledgment, that the glorious orb of day has ariſen upon it. The gaudy butterfly and the drowſy beetle; the ſcarlet roſe, the blue violet, the yellow jonquil; the ſapphire, the emerald, the topaz,

each

each in his degree, receives and communicates the light. In the dark, all are of one hue, nothing is received, and conſequently nothing can be given back.

2dly. Another remarkable property of light is the inconceivable velocity of its motion. Diſplay but a glimmering taper from the ſummit of yonder tower, at the dark hour of midnight, and with the rapidity of thought it reaches the eye ſtationed on that lofty mountain, though valleys, and rivers, and ſeas intervene. Behold the ſun ariſes, and in leſs time than is requiſite to reduce his diſtance from the earth, in diameters of our globe, to leagues, and from leagues to miles, to write down and to recite the ſum, I am already cheered with his rays, and "feel his ſovereign "vital lamp." What do you think is the fact here, a fact as demonſtrably certain as that 2 added to 3 amount to 5? Light travels down to us from the ſun, in a ſpace of time ſomewhat leſs than 8 minutes, ſay the half of the quarter of an hour: of this portion of time you have a diſtinct idea, but of the diſtance, and conſequently of the rapidity of light's progreſs, you can abſolutely form no idea at

all; it is expreſſed to the eye indeed by cyphers, and to the ear by ſounds, but thought is loſt while it attempts the computation; the diſtance is 71,730,000 miles.

Let me illuſtrate this by an example. From this city to Bath is 108 miles; the ſpeedieſt of our modes of conveyance requires more than 14 hours to perform that diſtance; the circumference of the globe is about 24,000 miles; were it poſſible, then, to travel round the globe without the interruption of a ſingle inſtant, and at the rate of the ſpeedieſt carriage, it would require 130 days, of 24 hours each, to perform a ſingle round; this multiplied by 3000, the diſtance of the ſun being ſo many times the circumference of the globe, produces 1077 years, the time requiſite to perform a diſtance equal to that of the ſun, without a moment's interruption, and at the ſpeedieſt rate of travelling. Now, light travels through that prodigious diſtance in little more than 7 minutes; its velocity, therefore, far exceeds all human comprehenſion. Striking repreſentation of that inconceivable, that awful rapidity, with which the Creator communicates himſelf to his creatures! Even

light

light requires time to run its race; but before the Fountain of light, diſtance is ſwallowed up, and time is loſt. I beg leave to ſuggeſt a

3d. Singular quality of this wonderful, this glorious creature of God: Though its motion be thus inconceivably rapid, it is not only perfectly harmleſs, but highly grateful and ſalutary. The motion of every other body, when violently accelerated, carries death and deſtruction along with it. A globe of iron hurled from the engine by the force of gunpowder, pierces through ribs of ſolid oak, and ſhatters to atoms the flinty rock. The river, ſwelled by the torrent from the mountain, with reſiſtleſs impetuoſity ſweeps before it the well-compacted bridge, the ſhepherd and his flock, the huſbandman and his harveſt, the mechanic and his forge. Let air, "thin air" be excited into more than ordinary ſpeed, and it gradually riſes from the pleaſant breeze, to the briſk gale, to the ſtormy wind, to the roaring tempeſt, to the mercileſs hurricane; the cedar of Lebanon is torn up by the roots, the ocean rages, and proud victorious navies are buried in the deep. But what is the rapidity of any, of all of theſe

compared

compared to that of light? Yet God hath tempered its rapidity ſo, that the moſt delicate of our organs, the eye, not only ſuſtains no injury, but derives unſpeakable benefit and delight from this inſtantaneous tranſmiſſion of its rays. But that ſame God can, when he will, arm it, too, with ſudden and irreſiſtible death. See, it burſts from yonder thundery cloud, and "the cloud-capt tower" is rent from the ſummit to the foundation; it falls on hapleſs man, and the marrow, and the ſolid bone which contains the marrow, are melted away before it. Pleaſing, awful view of the God of Juſtice, of the God of Love! a conſuming fire, a lambent flame! Intereſting and inſtructive view of the ſovereign power which he poſſeſſes, which he exerciſes over every creature, to make it a well-ſpring of delight, or a miniſter of vengeance! Glorious diſplay of mercy overflowing, but judgment reſtrained? Light, an univerſal, perennial, permanent ſource of life and joy; but only in a few rarer, tranſient inſtances, the inſtrument of death.

4th. Another precious and important quality of light, is its furniſhing man with an extenſive

extenſive and uſeful power of diſcriminating object from object; and to this end Providence has graciouſly ſupplied him with an organ completely adapted to the exerciſe of this power. Let light be withdrawn, and this fair and well-ordered frame of nature reverts to chaos; "ancient night" reſumes her murky empire: every thing is confounded: for what is beauty that is not ſeen; what is order and harmony not underſtood? And nothing can be ſeen without light, nothing underſtood or diſtinguiſhed unleſs the medium be clear. The range of our other ſenſes, how contracted it is! The objects of taſte and touch, in order to be diſcerned, muſt be cloſely applied to their reſpective organs: thoſe of ſmelling affect us only when brought very near: ſound grows fainter and fainter with diſtance, and, a very few leagues remote, fades and dies: but the eye, aided by light, darts like lightning from pole to pole, meaſures the planets, diſcriminates the fixed ſtars, whoſe diſtance far tranſcends that of the ſun; it knows no boundary but the flaming boundaries of the world.

With

With equal facility and advantage it is enabled to contract its ſphere; it deſcends from heaven to earth, from the diſtant mountain's ſummit to the adjacent plain; it wanders over the enamelled mead, dwells with ever new delight on "the human face "divine," traces the path of the crawling inſect. The eye lends additional value to the objects of our other ſenſes; the fragrance of the roſe is greatly enhanced by the diſplay of its various and beautiful tints; the reliſh of what we eat and drink becomes more exquiſite, or more inſipid and diſguſting, according as the eye is pleaſed or offended; the poliſh of the marble, the ſoftneſs of the downy peach, are more grateful to the touch from the concurring teſtimony of the other ſenſe; and even muſic, though more independent on viſion than the reſt, muſic, at all ſeaſons delightful, gives ſtill more delight when we behold the animated look, the elegant form, the graceful air of the perſon who ſings or plays. But the value and uſe of this precious, precious organ wholly depend on the preſence of light. To be

be in the dark is the ſame thing with being blind. We are reduced to the narrow, comfortleſs, uncertain, timid ſphere of the priſoner in his dungeon, incapable of diſtinguiſhing friend from foe, "preſented with "an univerſal blank; and wiſdom at one en-"trance quite ſhut out."

5th. Another property of light is its union with heat. Reflected light is not indeed poſſeſſed of this quality, or only in a very inferior degree; but light, iſſuing immediately from a luminous body, has a certain degree of warmth as well as of luſtre; and every body excited to a certain degree of heat, likewiſe emits rays of light. And what muſt be the maſs of united light and heat, treaſured up in yonder glorious Orb; "of this great "world the eye and ſoul," to admit of ſuch an amazing and inceſſant expenditure in all directions, and to remain undiminiſhed, inexhauſted by a conſtant efflux of almoſt ſix thouſand years! Bleſſed arrangement of eternal Providence! The ſame luminary which irradiates my path, and directs me how to eſcape the ſnare, the precipice, the enemy, in unbounded profuſion diſpenſes the vital fluid

fluid which cheriſhes and ſupports univerſal nature; maintains the current in the ſtream, multiplies and matures the golden harveſt, feeds the lamp of life! Bleſſed union, the happieſt image of Deity here below, vitality and direction in one; a quickening and an informing ſpirit; the principle that puts in motion, and which conducts that motion aright! Adorable, divine ſkill, which has planted the habitation of man preciſely at the point that terminates the extremes of hot and cold, of oppreſſive effulgence and glimmering obſcurity; which has ſo completely adapted the diſtance, the poſition, and the motions of our globe to the various nature, demands, and exertions of its various regions, and their various inhabitants, invariably, univerſally guarding againſt the *too little* and the *too much!* "Great and marvellous are thy "works, Lord God Almighty! Juſt and "true are all thy ways, thou king of Saints."

That I may not multiply particulars to exhauſt your patience and diſtract your attention, I ſhall ſubjoin but one more of the important properties of light, namely

6th. The wonderful facility with which

it

it may be propagated.* "Behold how great "a matter a little fire kindleth." A little ſpark, elicited by the ſtroke of ſteel from the boſom of the flint, is ſufficient to "ſet on fire "the courſe of nature." Though all material fire were exhauſted, extinguiſhed, with the aſſiſtance of one of the little bits of glaſs by which weakneſs of ſight is relieved, and a moment's ſunſhine, and furniſhed with a ſmall morſel of combuſtible matter, I can open to myſelf a new ſource of light, and, with it, of heat, which may be extended, and extended, without limitation. Nay the friction of one ſtick upon another will at length be excited into a flame, and ſupply materials of unbounded conflagration. Thus heaven from above, and the ſurface, nay the bowels, of the earth beneath, facilitate the production

* This may, at firſt ſight, appear a repetition of the idea ſuggeſted as the firſt property of light, the power of *communication*. But it is not ſo. By the firſt, I underſtand the effect of light as merely illuminating, or rendering objects viſible; in which caſe, the object is, and remains, wholly paſſive. But here, light is conſidered in its connection with heat, itſelf an active principle, and communicating its life and activity wherever it is applied. A poliſhed ball of iron, when cold, preſents an example of the former caſe; a ball made red hot is an inſtance of the latter.

of

of this ſalutary, this deſtructive element, which now animates, and, e'er long, ſhall devour the world. And thus is every man provided with the means of multiplying his own and increaſing his neighbour's comfort, and every man is armed with the moſt formidable of weapons for ſelf, or for mutual, deſtruction.

—I have hitherto conſidered light, and its concomitant, heat, merely as a material ſubſtance, perceptible by the corporeal organs. As the object of mind, or ſpirit, it is of ſtill higher importance, and mental light, with the ſelf ſame qualities as the material, ſtands confeſt a ſtill more glorious diſplay of the Creator's power and goodneſs. What light is to the eye, that, and inexpreſſibly more, is knowledge to the ſoul. What the material world would be without the ſun, and what it really is to the blind, the blackneſs of darkneſs, ſuch, and much more deplorable a blank is the ſphere of ſcience to the illiterate and uninſtructed. What ſtores of uſeful knowledge are contained in that volume, how fairly it is written, how happily expreſſed! Every word is a diſtillation of honey

from

from the comb. Alas, what avails it? The man has not been taught to read, or it is written in an unknown language; he ſees nothing but unmeaning ſcrawl, where his better educated neighbour diſcerns truth, beauty, propriety; finds a treaſure far richer than thoſe contained in the mines of Potoſi; the "word is found of him, and he eats it, "and it is the joy and rejoicing of his heart." The clown ſees on that roll only uncouth, unaccountable figures, circles, triangles, ſquares; to him they ſuggeſt no idea, convey no intelligence, he cannot purſue the ſteps of the demonſtration up to its concluſion: another takes it up; to him it is all light, he finds the principles of mechanics, of phyſics, of aſtronomy, clearly unfolded and happily applied; he goes "on his way re-"joicing," he is more honourable than his ignorant brother, he has advanced one ſtep higher toward the Father of lights. Put that inſtrument into the hand of the unlearned, and it produces nothing but jargon and diſcord; the characters, deſigned to direct the voice or the finger, are to him blots and ſcratches merely: his neighbour touches it,

and lo, it diſcourſes heavenly muſic; theſe blots and ſcratches teach the voice to melt into melody, and rouſe the trembling chords to harmony: as the experienced eye runs along the line, the ear in uniſon catches the repreſented ſound, and it drops like manna from the tuneful lips.

This mental light, we ſaid, poſſeſſes all the qualities of the material.—Knowledge as naturally illuminates its ſphere, as the ſun gilds the hemiſphere that is turned toward it.

How various, how rapid, the means of communication between ſoul and ſoul! with what velocity is thought conveyed by the lightning of the eye; how pleaſingly is inſtruction given, and received, by the gift of ſpeech; with what fidelity is intelligence carried, the friendly hint, the ardent wiſh, the tender ſigh wafted "from Indus to the "pole," by the help of letters!

"Truly the light is ſweet, and a pleaſant "thing it is for the eyes to behold the "ſun;" and O how pleaſing to the mind's eye to diſcern the bright, the lovely form of ſacred truth, that intellectual ſun in the firmament of ſcience; to behold the expanſions

ſions of heaven-taught wiſdom, circle embracing circle, in endleſs progreſſion, the ſoul ariſing from earth to heaven, from the creature to God; winging its ardent flight from the ruins of expiring worlds, to "new hea-"vens, and a new earth, wherein dwelleth "righteouſneſs."

By material light we are enabled to diſtinguiſh one viſible object from another, and, by the eye, to eſtimate many of their peculiar and diſtinctive qualities; by the underſtanding, or mental eye, in like manner, a new world of wonders is diſcovered and enjoyed; the boundaries of truth and error, juſtice and violence, ſin and duty, are clearly diſcriminated; the deluſive forms which miſled childhood, and ignorance, and prejudice; which inſpired groundleſs terror, or confidence equally unreaſonable, now wholly diſappear, like phantoms of the night, or are ſeen in their true colours and proportions, and he who before "ſpake as a child, underſtood as "a child, thought as a child," now "puts "away childiſh things."

As material light is ever incorporated with heat, reſides in fire, is of the ſame nature

with it, and flows from it, as from its fountain, ſo is all real, direct mental light animated and energetic; while it irradiates it quickens; it opens at once the field of action, and incites to act; it illuminates the path, and puts the traveller in motion.

I know that the intellectual, as well as the material world, exhibits inſtances of illumination deſtitute of activity. The *ignis fatuus* ſcampers over cold, and moiſt, and marſhy places, and often deceives the unwary traveller to his hurt; the glow-worm ſparkles with frigid, cheerleſs, contracted luſtre; the diamond is ſaid to emit rays in the dark, but they partake of the adamantine hardneſs, coldneſs, inanimation of the ſtone from which they proceed; nay, from unprolific putrefaction, I have ſeen a faint emanation of periſhing light. And the counter-part of all this may have been obſerved in the ſphere of ſcience; knowledge miſleading, not directing, its poſſeſſor; amuſing without inſtructing; a luminous head aſſociated with a flinty heart, a tranſient ſplendor iſſuing from corruption, and haſtening back to corruption again; but as all ſalutary light flows immediately, or by re-

reflection, from the Parent of day, and is the guide and comforter of human life, ſo all beneficial ſcience is from the "Father of "lights," the quickening ſpirit, which animates to honourable exertion, and under whoſe genial influence "the path of the juſt, "as the ſhining light, goeth on unto the "perfect day."

Finally, as material, ſo mental, light is of eaſy and ſimple propagation. I have but to apply my lighted taper to my neighbour's lifeleſs torch, and it inſtantly lives and ſhines, and I am not a whit impoveriſhed. My lamp burns the brighter for the radiance it has communicated; and he whom I have enriched, is enabled to enrich in his turn, not only without loſs, but unſpeakably to his advantage; and ſo on to infinity, till all is light, and no darkneſs remains: Thus while I teach I learn; the more I give away, the more is left for me; and the diffuſion of knowledge, like the extenſion of mercy, "is twice bleſt; "it bleſſeth him who gives, and him who "takes."

—But Scripture and experience convey a ſtill much more ſublime idea of light than any

hitherto ſuggeſted, compared to, and deſtitute of, which, the light of the ſun is the mere glimmering of a taper, and the illumination of ſcience ſplendid folly; the world of nature a ſyſtem, of ſhining baubles, the ways of Providence a labyrinth of inconſiſtency and contradiction, and the boaſted diſcoveries of human ſagacity and induſtry, pompous nothings.—Light ſignifies the knowledge that makes wiſe unto ſalvation, the divine principle which quickeneth "the dead in treſ-"paſſes and ſins." "This is life eternal, "that they might know thee the only true "God, and Jeſus Chriſt whom thou haſt "ſent." God, the author of this great ſalvation, is accordingly exhibited under the character of Light. "This is the meſſage," ſays St. John, "which we have heard of "him, and declare unto you, That GOD is *light*." Jeſus, the great agent in the work of redemption, is repreſented under the ſame image; "a *light* to lighten the Gentiles, "and the glory of Iſrael;"—"in him is life, "and the life is the *light* of men"—"John "came to be a witneſs of that LIGHT; HE "is the true Light, which lighteth every "man

"man that cometh into the world." And thus he ſpeaks of himſelf under the ſame character, "I am the *light* of the world; he that followeth me ſhall "not walk in dark-"neſs, but ſhall have the light of life."—The goſpel, or the revelation of the ſalvation of God, to periſhing ſinners, is, in both prophetic and hiſtorical language, preſented to us under the ſame denomination, and in the preaching of Chriſt was this Scripture fulfilled, "the people which ſat in darkneſs "ſaw great *light*, and to them which ſat in "the region and ſhadow of death *light* is "ſprung up." The whole word of God bears the ſame ſacred impreſs. "Thy word," ſays the Pſalmiſt, "is a *lamp* unto my feet, "and a *light* unto my path."—The miniſters of religion, the witneſſes of the bleſſed Jeſus, are thus likewiſe honourably diſtinguiſhed; John Baptiſt is denominated by the Saviour himſelf, "a burning and a ſhining *light*," and of his apoſtles in general He ſaith, "ye "are the *light* of the world." Finally, all true Chriſtians, every member of that body, whereof Chriſt is the head, are deſigned by this as their diſtinctive character. He calls

them "children of *light*" to diſtinguiſh them from the diſobedient, impenitent and unbelieving, "for every one that doth evil "hateth the light, neither cometh to the "light, leſt his deeds ſhould be reproved; "but he that doth truth cometh to the light, "that his deeds may be made manifeſt, that "they are wrought in God."

Thus ſalvation, in its riſe and progreſs, in the fountain and in the ſtream, in its cauſe, conduct, and effects, is all ſpiritual light, and life, and joy; and its conſummation ſhall be ſimilar to, and worthy of, the original deſign: "with thee, great God, is the "fountain of life; in thy light ſhall we ſee "light." "Now we ſee through a glaſs, "darkly; but then face to face." Beloved, now are we the ſons of God, and it doth not yet appear what we ſhall be; "but we "know that when He ſhall appear, we ſhall "be like him, for we ſhall ſee him as He "is." Then "we all with open face, behold-"ing, as in a glaſs, the glory of the Lord, "ſhall be changed into the ſame image from "glory to glory, even as by the ſpirit of "the Lord. Chriſtian, ariſe, ſhine, for

"thy

"thy light is come, and the glory of the "Lord is riſen upon thee."

And thus, like its divine Author, Light is the origin and iſſue of all things: The alpha and omega, the firſt and the laſt, the beginning and the end of the creation of God; the life and ſoul of the material, intellectual, and ſpiritual worlds. And, in proportion as this treaſure is poſſeſſed, one being is more exalted than another, and the nearer does the creature approach to the Creator. And, thus, a field of exertion, of improvement, of enjoyment, is expanded for the immortal ſoul of man, of unbounded extent, of everlaſting duration. Who of ſaints, or angels, is "able to comprehend what is the "breadth, and length, and depth, and height; "who is able to know the love of Chriſt, "which paſſeth knowledge." What created veſſel can contain all "the fulneſs of God?"

It remains, not that I *exhort* this Society to perſevere in well-doing, in diffuſing ſaving light and knowledge, but that I *congratulate* them on the ample ſucceſs of their labours of love, on the daily increaſe of their numbers, and the conſequent extenſion of the means of doing

doing good. This Charity has now happily attained the 44th year of its exiſtence, its ſupporters have multiplied from ſix to upwards of one thouſand, its benefits are not reſtricted to a province, but ſcattered over a globe, and its influence, unlimited by time and death, reaches into eternity. Bleſſed is the hand which feeds the hungry, clothes the naked, and ſets the priſoner free; bleſſed the hand which pours the light of cheerful day on the ſightleſs eye-ball, or makes proviſion for indigent blindneſs; but more bleſſed the hand which illuminates the dark ſoul, ready to "periſh for lack of know-"ledge," which liberates the immortal ſpirit from the fetters of ignorance, which diſcloſes "the unſearchable riches of Chriſt" to the ſlave of ſin, and diſplays the glories of eternity to the miſerable wretch whoſe eyes the God of this world had blinded. If it be in the power of man to create, it is in this reſpect; to communicate one ray of ſaving light, is to irradiate a world; to give away a Bible may be the creation of a new ſun, the contemplation of which may occaſion joy in heaven, cauſe "the morning ſtars to ſing

"toge-

"together, and all the ſons of God to ſhout "for joy." Bleſſed communication from God to man! A man enabled to be a God to his neighbour, the author of a new exiſtence, the fountain of joy unknown before, the beſtower of life and immortality, the diſpenſer of a throne above the ſkies! Man, exalted to the reſemblance of his Maker, in the moſt glorious of his perfections! A portion of omnipotence, of omnipreſence conferred upon him, a power to ſay, "let there "be light," and it is done; let "the ſun of "righteouſneſs ariſe with healing in his "wings," and it cometh to paſs; a power to make "the Ethiopian change his colour," to transform the naked ſavage into a child of God, to direct the forlorn wanderer in the pathleſs deſert, in the way that leads to the houſe of his Father in heaven; a power "to "open men's eyes, to turn them from dark-"neſs to light, and from the power of Satan "unto God!"

You have heard of the fabulous creation of Prometheus; he is ſaid to have moulded clay into the human form, and to have animated it with fire ſtolen from heaven; this

creation

creation is no fiction, but a glorious reality, in the hands of this beneficent inſtitution; it finds men mere clay, a lifeleſs form, and by communication of the celeſtial fire of God's holy word, they ſtart up into newneſs of life, they reflect their divine original; and a bleſſed, an eternal recompence, not relentleſs puniſhment, awaits the hallowed theft.

—The poſterity of ſuch as were early promoters of this pious deſign, I beg leave to *congratulate* on their inheriting, together with the name and ſubſtance, a portion of the ſpirit of their forefathers, and I charge them before God and his holy angels, that, whatever elſe they, in their turn, tranſmit to their children, they be careful to hand down a ſerious concern to promote religious knowledge among the poor, and thus become, in the beſt ſenſe of the word, Fathers to them.

—If there be any preſent, who have not hitherto had an opportunity of putting forth their hand to this good work, them I *congratulate* on that which now preſents itſelf, of doing themſelves more real honour, of procuring more ſolid ſatisfaction, and of conferring

ring on the world a greater benefit, than could in any other way, and at ſo eaſy a rate, be purchaſed: An opportunity of exchanging a bit of otherwiſe barren, unproductive metal, into the prolific word of life; of converting the price of an hour's entertainment of a wealthy friend, or neighbour, who needs it not, and feels no gratitude for it, into a laſting feaſt to the ſouls of men, to be acknowledged by ages unborn, and to be rewarded in heaven: An opportunity of multiplying the wonders of creation, and of enlarging the vaſt empire of God himſelf. Were I to argue as a mere man of the world, I could with confidence affirm, that the commerce which I am this day called to recommend, is moſt lucrative, as well as moſt honourable; what you here lay out, returns with accumulated intereſt; the bread you "caſt on theſe waters "comes back after *not* many days," greatly increaſed, like the loaves in the Saviour's hand; a few drachms of gold ſwell into a multitude of Bibles, more to be deſired than gold, yea than much fine gold; and thouſands are ſucceſſively, immortally fed by the purchaſe of a little ſhining duſt.

I *congratulate*

—I *congratulate* my country on the exiſtence, the ſucceſs, and the apparent permanency of this inſtitution. Queen of the iſles in beauty, in fertility, in opulence, in power, here ſhe is moſt a queen. What plans of charity and mercy, in reſpect of number, of munificence, of nobility in deſign, of promptitude in execution, of felicity in point of effect, are once to be compared to hers? Great indeed is the multitude of her ſins, which need to be covered, which conſtitute her diſhonour, diſturb her tranquillity, threaten her ruin; but while the principle of benevolence is in ſuch vigour, while the cauſe of God, and truth, and humanity, has ſuch numerous, zealous and generous ſupporters; while the comfortable maintenance, and religious inſtruction of the poorer ranks of the community, are objects of ſuch high importance in the eyes of the more elevated and affluent; we truſt it is an earneſt that Providence has ſtill many, and great, and laſting, national bleſſings laid up in ſtore for us. And I call upon all who hear me this day, as they love their country, as they wiſh her proſperity, as they would preſerve her ſecurity,

rity, and ſupport her rank amidſt the nations of the earth, that they exert themſelves to extend the knowledge of God's word, to encourage and inculcate, by admonition, by example, by their prayers, by their influence, a ſimple and ſound morality, a pure and undefiled religion, an unaffected, heart-felt, regular, practical devotion. What you ſee and feel to be of moment for yourſelves to know and to do, that you will ſee it your duty to recommend to others, that they alſo may caſt in their lot among us, may take part of the honourable burthen, enjoy the ſatisfaction, and participate in the reward.

—I *congratulate* the ſons of light, "the ſpi-"rits of juſt men made perfect," on the conſtant addition which Providence is making to their number, by the eſtabliſhment, ſupport, and ſucceſs of inſtitutions like ours. It is thus Jehovah is fulfilling the Scriptures, and bringing forward that promiſed fulneſs of time, when "the earth ſhall be filled with "the knowledge and glory of the Lord, as "the waters cover the ſea." In thoſe happy regions of eternal day, the ranſomed of the Lord, for ever emancipated from the darkneſs

and

and depreſſion of "a body of ſin and death," diſcern more clearly the deſigns of Heaven advancing to their accompliſhment, the majeſtic progreſs of the eternal "purpoſe, of Him "who worketh all things after the counſel "of his will," toward its final conſummation; gradually extending the empire of ſaving light along the burning coaſt of Africa, through the yet inacceſſible wilds of America, over the ſwarming ſhores waſhed by the Ganges, to the remote, unknown iſlands of the ſouthern hemiſphere, within the frozen regions which approach the poles. Behold the hand of heaven removing the veil which covers the eyes of the ſcattered remnant of the poſterity of Abraham; "all Iſrael ſaved, "and the fulneſs of the Gentiles come "in." Behold, "The heathen given to "Meſſiah the prince for his inheritance, and "the uttermoſt parts of the earth for his "poſſeſſion." "His name ſhall endure for "ever; his name ſhall be continued as long "as the ſun; men ſhall be bleſſed in Him; "all nations ſhall call Him bleſſed." Amongſt the innumerable myriads which encompaſs the throne, in the fulneſs of joy, are there not

ſome

ſome who were once our aſſociates in theſe labours of love, who now reſt from their labours and their works have followed them? And what boſom does not glow with holy deſire, with exalted hope to be united to that aſſembly, who eternally rejoice in God, behold the face of Chriſt Jeſus, celebrate the triumphs of redeeming love; who look into, admire, adore the plans of infinite wiſdom; exulting to reflect that they have been what they have been, that they are what they are, the monuments of free, ſovereign grace, and to recollect what, by the grace of God, they have been and done to others: dwelling in the preſence of uncreated light, contemplating the new creation of God, themſelves a part of it; who behold Jehovah rejoicing in all his works; and the Redeemer, ſeeing "the "travail of his ſoul," completely, eternally "ſatisfied."

THE END.

BRITISH MUSEUM